

No.	Metrics	Description	Reference
1	TotalLinesOfCode	Total number of lines of code	[2]
2	TotalSymbols	Total size of the code fragment in symbols	[5]
3	SymbolsPerLine	Per-line-averaged size of the code fragment in symbols	[5]
4	Area	Total nested area of the code fragment	[1]
5	AreaPerLine	Per-line-averaged nested area of the code fragment	[1]
6	TotalConnectivity	Total coupling with the enclosing class	[3,4]
7	TotalConnectivityPerLine	Average coupling with the enclosing class	[3,4]
8	FieldConnectivity	Total coupling with the enclosing class by fields	[3,4]
9	FieldConnectivityPerLine	Average coupling with the enclosing class by fields	[3,4]
10	MethodConnectivity	Total coupling with the enclosing class by methods	[3,4]
11	MethodConnectivityPerLine	Average coupling with the enclosing class by methods	[3,4]
12	MethodDeclarationLines	Total size of the enclosing method in lines	[5]
13	MethodDeclarationSymbols	Total size of the enclosing method in symbols	[5]
14	MethodDeclarationSymbolsPerLine	Per-line-averaged size of the enclosing method in symbols	[5]
15	MethodDeclarationArea	Total nesting area of the enclosing method	[5]
16	MethodDeclarationDepthPerLine	Per-line-averaged nesting area of the enclosing method	[5]
17	KeywordContinueTotalCount	Number of keyword 'Continue' in the code fragment	[5]
18	KeywordContinueCountPerLine	Per-line-averaged keyword 'Continue' in the code fragment	[5]
19	KeywordForTotalCount	Number of keyword 'For' in the code fragment	[5]
20	KeywordForCountPerLine	Per-line-averaged keyword 'For' in the code fragment	[5]
21	KeywordNewTotalCount	Number of keyword 'New' in the code fragment	[5]
22	KeywordNewCountPerLine	Per-line-averaged keyword 'New' in the code fragment	[5]
23	KeywordSwitchTotalCount	Number of keyword 'Switch' in the code fragment	[5]
24	KeywordSwitchCountPerLine	Per-line-averaged keyword 'Switch' in the code fragment	[5]
25	KeywordAssertTotalCount	Number of keyword 'Assert' in the code fragment	[5]
26	KeywordAssertCountPerLine	Per-line-averaged keyword 'Assert' in the code fragment	[5]

27	KeywordSynchronizedTotalCount	Number of keyword 'Synchronized' in the code fragment	[5]
28	KeywordSynchronizedCountPerLine	Per-line-averaged keyword 'Synchronized' in the code fragment	[5]
29	KeywordBooleanTotalCount	Number of keyword 'Boolean' in the code fragment	[5]
30	KeywordBooleanCountPerLine	Per-line-averaged keyword 'Boolean' in the code fragment	[5]
31	KeywordDoTotalCount	Number of keyword 'Do' in the code fragment	[5]
32	KeywordDoCountPerLine	Per-line-averaged keyword 'Do' in the code fragment	[5]
33	KeywordIfTotalCount	Number of keyword 'If' in the code fragment	[5]
34	KeywordIfCountPerLine	Per-line-averaged keyword 'If' in the code fragment	[5]
35	KeywordThisTotalCount	Number of keyword 'This' in the code fragment	[5]
36	KeywordThisCountPerLine	Per-line-averaged keyword 'This' in the code fragment	[5]
37	KeywordBreakTotalCount	Number of keyword 'Break' in the code fragment	[5]
38	KeywordBreakCountPerLine	Per-line-averaged keyword 'Break' in the code fragment	[5]
39	KeywordDoubleTotalCount	Number of keyword 'Double' in the code fragment	[5]
40	KeywordDoubleCountPerLine	Per-line-averaged keyword 'Double' in the code fragment	[5]
41	KeywordThrowTotalCount	Number of keyword 'Throw' in the code fragment	[5]
42	KeywordThrowCountPerLine	Per-line-averaged keyword 'Throw' in the code fragment	[5]
43	KeywordByteTotalCount	Number of keyword 'Byte' in the code fragment	[5]
44	KeywordByteCountPerLine	Per-line-averaged keyword 'Byte' in the code fragment	[5]
45	KeywordElseTotalCount	Number of keyword 'Else' in the code fragment	[5]
46	KeywordElseCountPerLine	Per-line-averaged keyword 'Else' in the code fragment	[5]
47	KeywordCaseTotalCount	Number of keyword 'Case' in the code fragment	[5]
48	KeywordCaseCountPerLine	Per-line-averaged keyword 'Case' in the code fragment	[5]
49	KeywordInstanceofTotalCount	Number of keyword 'Instanceof' in the code fragment	[5]
50	KeywordInstanceofCountPerLine	Per-line-averaged keyword 'Instanceof' in the code fragment	[5]
51	KeywordReturnTotalCount	Number of keyword 'Return' in the code fragment	[5]
52	KeywordReturnCountPerLine	Per-line-averaged keyword 'Return' in the code fragment	[5]
53	KeywordTransientTotalCount	Number of keyword 'Transient' in the code fragment	[5]

54	KeywordTransientCountPerLine	Per-line-averaged keyword 'Transient' in the code fragment	[5]
55	KeywordCatchTotalCount	Number of keyword 'Catch' in the code fragment	[5]
56	KeywordCatchCountPerLine	Per-line-averaged keyword 'Catch' in the code fragment	[5]
57	KeywordIntTotalCount	Number of keyword 'In' in the code fragment	[5]
58	KeywordIntCountPerLine	Per-line-averaged keyword 'In' in the code fragment	[5]
59	KeywordShortTotalCount	Number of keyword 'Short' in the code fragment	[5]
60	KeywordShortCountPerLine	Per-line-averaged keyword 'Short' in the code fragment	[5]
61	KeywordTryTotalCount	Number of keyword 'Try' in the code fragment	[5]
62	KeywordTryCountPerLine	Per-line-averaged keyword 'Try' in the code fragment	[5]
63	KeywordCharTotalCount	Number of keyword 'Char' in the code fragment	[5]
64	KeywordCharCountPerLine	Per-line-averaged keyword 'Char' in the code fragment	[5]
65	KeywordFinalTotalCount	Number of keyword 'Final' in the code fragment	[5]
66	KeywordFinalCountPerLine	Per-line-averaged keyword 'Final' in the code fragment	[5]
67	KeywordFinallyTotalCount	Number of keyword 'Finally' in the code fragment	[5]
68	KeywordFinallyCountPerLine	Per-line-averaged keyword 'Finally' in the code fragment	[5]
69	KeywordLongTotalCount	Number of keyword 'Long' in the code fragment	[5]
70	KeywordLongCountPerLine	Per-line-averaged keyword 'Long' in the code fragment	[5]
71	KeywordStrictfpTotalCount	Number of keyword 'Strict' in the code fragment	[5]
72	KeywordStrictfpCountPerLine	Per-line-averaged keyword 'Strict' in the code fragment	[5]
73	KeywordFloatTotalCount	Number of keyword 'Float' in the code fragment	[5]
74	KeywordFloatCountPerLine	Per-line-averaged keyword 'Float' in the code fragment	[5]
75	KeywordSuperTotalCount	Number of keyword 'Super' in the code fragment	[5]
76	KeywordSuperCountPerLine	Per-line-averaged keyword 'Super' in the code fragment	[5]
77	KeywordWhileTotalCount	Number of keyword 'While' in the code fragment	[5]
78	KeywordWhileCountPerLine	Per-line-averaged keyword 'While' in the code fragment	[5]

References:

- [1] Haas, Roman, and Benjamin Hummel. "Deriving extract method refactoring suggestions for long methods." In *International Conference on Software Quality*, pp. 144-155. Springer, Cham, 2016.
- [2] Lorenz, Mark, and Jeff Kidd. *Object-oriented software metrics: a practical guide*. Prentice-Hall, Inc., 1994.
- [3] Aniche, Mauricio, Erick Maziero, Rafael Durelli, and Vinicius Durelli. "The effectiveness of supervised machine learning algorithms in predicting software refactoring." *IEEE Transactions on Software Engineering* (2020).
- [4] Higo, Yoshiki, Shinji Kusumoto, and Katsuro Inoue. "A metric-based approach to identifying refactoring opportunities for merging code clones in a Java software system." *Journal of Software Maintenance and Evolution: Research and Practice* 20, no. 6 (2008): 435-461.
- [5] Caulo, Maria. "A taxonomy of metrics for software fault prediction." In *Proceedings of the 2019 27th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering*, pp. 1144-1147. 2019.